POPULATION TODAY

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FROM THE EDITOR'S DESK

The population are Asian? A number of the population is Asian? The largest percentage of the country are Asian?---

Surely, demography, of all fields, should be ultra-sensitive to grammatical number. Yet some population-related words (called collective nouns, or nouns of multitude) are tricky rascals. When are they singular? When are they plural? And is there a gray area in between?

Rule 1 – Collective nouns (a *fleet* of ships, a galaxy of demographers) are *usually* singular, but can also be plural. It depends on whether you're emphasizing a single entity or the individuals that constitute it. This powerful rule can be a license to kill, so use it with respect. But it does help in making sense of the following grammatical situations: *The managerial group was made up of businesspeople; the managerial group are putting on their raincoats.*

In demography the watchword is *population*. It's usually singular, because populations are considered mostly as single entities and raincoat donning is seldom discussed. Thus: *The population is largely Asian.*

Rule 2 – Remember the adage: "the number *was*, a number *were*." This formula works for both the word *number* and for similar words, like *percentage*. As in: *The number of Asians was high; a number of Indians were included; the percentage of Pakistanis was relatively low.* "A number of" can be thought of as being synonymous with the adjective "numerous," with the singular or plural question decided by the noun so modified (e.g., by the Indians mentioned above).

Rule 3 – For numerical percents and proportions, follow Rule 1 above, i.e., use either singular or plural as appropriate – but remain wary. *28 percent of the sample is Russian; 30 percent of the sample are infants; three-fourths of the population is under 60 years of age; half of the sample are projected to put on their raincoats.*

Rule 4 – A rate is singular, even when it's full of numbers. *Some 20 deaths per 1,000 is the average in that part of the world.*

Rule 5 – In grammar as in life, there's no reason to obsess; not even Ted Williams batted 1,000. Just try to make it halfway logical, or at least "sound right" when said aloud. If cornered about grammatical number by a persnickerty Ms. Thistlebottom as to a noun's plural-ness, feel free to say, "Why, I was following the rule on collective nouns right out of *Words into Type* (3rd ed., page 354)." And if totally cornered, throw in the ultimate grammatical excuse: "And, after all, it's a living language ."

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Does History progress, or is life a Sisyphean process? Something to ponder. But one unquestionable improvement in the human lot during the late 20th century has been the revolution in graphic design. Let's face it, many publications used to be on the homely side (though in all fairness *PT*'s predecessor *Intercom* looked like a dream compared to say, the old *Boston Herald*). Furthermore, the graphics "ante" goes up every day (forget *Vanity Fair* and take a look at how slick *Fire House* magazine is).

In line with this trend, starting in 1986 all PRB publications incorporate a new, familial "look" – graphic specs designed by Morris, Hyson, Ferretti, and Gasper, who created PRB's monogram logo. Thus, the new clothes that *PT* is wearing this month. Our revamped appearance is designed to be more picturesque, spacious, and inviting. We hope you like it.

– Art Haupt

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Halley's Other Comet

On Feb. 9, 1986, a dirty, streaking snowball 3 miles (5 km) in diameter will make a tight U-turn around the sun and head outward again, the dust-swirled vapor boiling off its surface painting a sunshot streamer across the inner Solar System

Although only alert binocular-wielders may have been able to spot the cosmic visitor in the evening sky during its long fall, by March it will be visible to billions of people, low in the early morning sky as it climbs away from the sun. The diaphanous tail may (or may not) be faintly visible across one-sixth of the sky before it shortens and dims with distance and late next spring finally disappears – for another 76 years.

The object, of course, is Comet Halley (rhymes with tally), the superstar of comets, now making its 29th recorded visit to the inner Solar System. Among other things, the comet's return periodically redresses the neglect of English astronomer Edmond Halley (1656-1742), a relatively unsung contemporary of Isaac Newton whose curiosity and experimentation enriched many branches of science – including demography.

Halley, in fact, almost casually helped invent social statistics. The history of science has been the history of data quantification and analysis, and little by little this has been applied to the social sciences.

> 'Above all things,' Halley wrote, 'celibacy should be discouraged, as by extraordinary taxing and military service . . .'

In the 17th century, the only available demographic data were bills of mortality – weekly statements listing deaths and their causes. Londoner John Graunt, a member of the Royal Society and a demographic pioneer, used these bills to study causes of death and population trends. Another investigator, William Petty, organized a social survey of Ireland. Halley knew of these men's work. In 1692 the Society obtained a set of mortality bills from the town of Breslau in Germany – reports which listed the age and sex of all persons who had died there from 1687 through 1691.

The Breslau data were notable for their thoroughness, and Halley set out to apply his mathematical skills to analyzing the city's mortality patterns. What he came up with was a table of "an Estimate of the Ages of the whole People of that City, and thereby shewing the proportion of Mortality in each age, and a rule to estimate how long any person may reasonably be supposed to live."

Halley's Demographic Comet

Subsequent scholars have questioned the details of Halley's methods. But in essence his Breslau analysis constitutes the first life table – a simulation of the lifetime mortality experience of a population. While earlier pioneers had taken a shot at gauging life expectancy of individuals, Halley was first to use death statistics in different age groups to calculate a person's chances of dying as he passed through each age group. He also endeavored (with mixed success) to calculate back to the fertility and population trends of the population.

Today, the life table is one of the foundations of demographic analysis. But even in the 17th century, the life table was no mere academic exercise. Life insurance and annuities had already been around for centuries, but the setting of premiums and benefits was very

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Housing to Go Upscale in 1990s

The baby boomers are destined to do it again. The giant generation that boomed the sales of diapers in the 1950s, soft drinks and records in the 1960s, and designer jeans and condominiums in the 1970s will be the salvation of the housing industry over the next decade, say urban planners George Sternlieb and James W. Hughes in PRB's *Bulletin* for January, "Demographics and Housing in America."

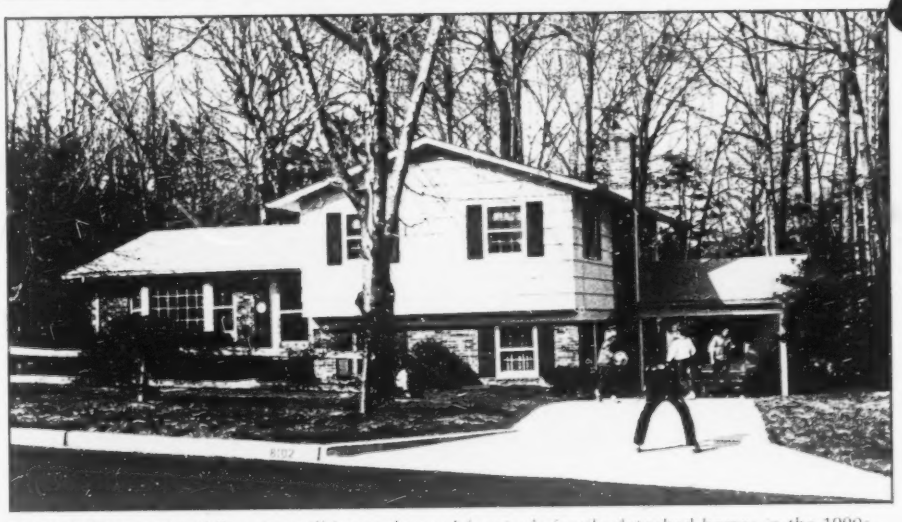
Because the household-formation ages of 18 to 34 are being taken over by the baby bust generation, born as fertility declined from the mid-1960s to the mid-1970s, the housing industry is facing an inevitable falloff in the total demand for housing and especially for "entry-level" housing. But this will be offset by the middle-aging of the baby boomers, say Sternlieb and Hughes.

By 1995 most of this powerful generation, born from 1947 to 1964, will be in the peak-earning, high-homeownership, and highly marital and familial ages of 35 to 54. As a result, predict Sternlieb and Hughes, steady growth in real median family income – not seen since 1973 – will resume. Married-couple households, which dropped from 74 percent of all American households in 1960 to 58 percent in 1985, will make a comeback. And the housing industry will flourish as family-oriented, repeat homebuyers seek upscale dwellings with all the high-tech trimmings, most likely in the suburbs.

The baby-boom generation has been reshaping housing markets since its birth, say Sternlieb, who is director of the Center for Urban Policy Research at Rutgers University, and Hughes, chair of Rutgers' Department of Urban Planning and Policy Development. Tract-house suburbia was born in response to the family-building needs of parents in the "nesting" generation. Bolstered by the unbroken postwar prosperity that lasted to the early 1970s, new housing starts averaged 1.5 million a year in the 1950s and 1960s.

The baby boom generation's arrival at the household-formation ages touched off the "Golden Housing Age" of the 1970s. Total numbers of households increased by an average 1.7 million a year, compared to 1.1 million per year in the 1960s. Altogether a record 19 million year-round dwellings were added to the nation's housing stock from 1970 to 1980. New housing starts topped 2 million in some years, though with a plummet during the recession of 1974-1975. Real median family income declined after 1973 and inflation escalated housing costs, but inflation also fueled the demand for homeownership as an investment hedge. Half a million renter households were added each year.

HUD photo



The babyboomers' middle-aging will boost demand for single-family detached homes in the 1990s.

> 'More fertile with income than with offspring [the baby boomers] will edge the housing market further upscale.'

The swinging singles and "mingles" life styles of the youthful baby boomers put condominiums, two-master-bedroom-suite luxury apartments, and two-bedroom townhouses into the market. Now the baby boomers' maturing into their familial middle years promises a return to more conventional single-family detached houses – "America's home of choice" – say Sternlieb and Hughes.

Housing starts and net gains in households plunged to barely a million a year during the deep recession of 1980-1982, they point out. But both have recovered along with the economy since then, and restrained inflation has helped brake soaring housing costs. In addition, "the major demographic factors are in place to promise a bright future for housing over the next decade, barring unforeseen calamities."

According to Sternlieb and Hughes' projections, married-couple households headed by people aged 35-54, whose incomes are traditionally highest of all households, will account for 8.1 million, or 56 percent, of the 14.5 million total increase in households between 1983 and 1995. In the first half of the 1990s, renter households – dominated by baby busters – will grow by only 175,000 a year, while owner households increase by an average 882,000 a year. This will be a drop from the 1.2 million average owner-household annual gain of the 1970s, Sternlieb and Hughes observe, but the maturing baby boom generation, "more fertile with income than with offspring, will edge the housing market further upscale."

They admit that not all Americans will be able to afford upscale or even adequate housing: younger baby boomers entering the market when prices are higher; workers unequipped for the new high-tech age; and female-headed single-parent families. Cuts in federal housing

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aid have worsened the low-income housing outlook since 1981 and are unlikely to be restored in the new balanced-budget climate.

Slower projected growth in female-headed households could mitigate the problem somewhat, Sternlieb and Hughes point out. Low-income housing needs are increasingly being taken on by local governments and nonprofit groups, they observe, and could be met in part by more rehabilitation and subdivision of existing housing. They also suggest that homebuilders and mortgage lenders anxious to keep up the market for new housing "could usefully join forces with the poor and their housing needs." – *J.V.T.*

Copies of the 34-page *Population Bulletin*, "Demographics and Housing in America" (Vol. 41 No. 1), can be ordered for $4.00 each; 2-10 copies, $3.00 each; 11-50 copies, $2.50 each; over 50, $2.00 each. Orders of under $20 must be prepaid. Please include $1.00 for postage and handling. Send order and remittance to PRB, Circulation Dept., P.O. Box 35012, Washington, D.C. 20013.

McPherson Speaks on Population Pressures

M. Peter McPherson, Director of the U.S. Agency for International Development, argues that the debate about population growth's effect on economic development has often missed the mark.

"Strong family planning programs in the interests of families and individuals alone justify the programs even if there were no impact on economic growth," he told the Washington, D.C., audience attending the American Enterprise Institute's Public Policy Week in December.

"The availability or lack of family planning services is of enormous consequence to some families and individuals," he said – a point sometimes lost in the broader debate about the societal consequences of rapid population growth. He listed three categories of family and individual need: "(1) The desire of couples to determine the size and spacing of their family; (2) mother and child survival; (3) reduction of abortion."

"Fewer children are an option which American families take for granted" – thanks to family planning information and services. "We must remember that these services are not available to millions of families in the Third World." Yet many surveys show a large number of Third World women would like to space births or limit their family size but cannot, because of lack of services.

AID head McPherson

Meanwhile, however unclear the linkage between population and economic growth, the debate goes on – a debate that McPherson felt was characterized in black and white terms by the optimists and pessimists involved.

In particular, he described the case of the optimists – those who contend "that nations, over time are able to adjust to the pressures of more people; indeed that the pressure may be a very important stimulus to innovation and growth.

"It seems to me," McPherson continued, "that those taking the position that nations can adjust [to rapid population growth] must assume a degree of political flexibility. They may underestimate, for example, the tribal conflicts, the urban exploitation of a rural majority of many African countries, famines, etc. Also, those who assume that all nations can adjust may not be realistic in judging the ability of fairly primitive societies to obtain technological innovation.

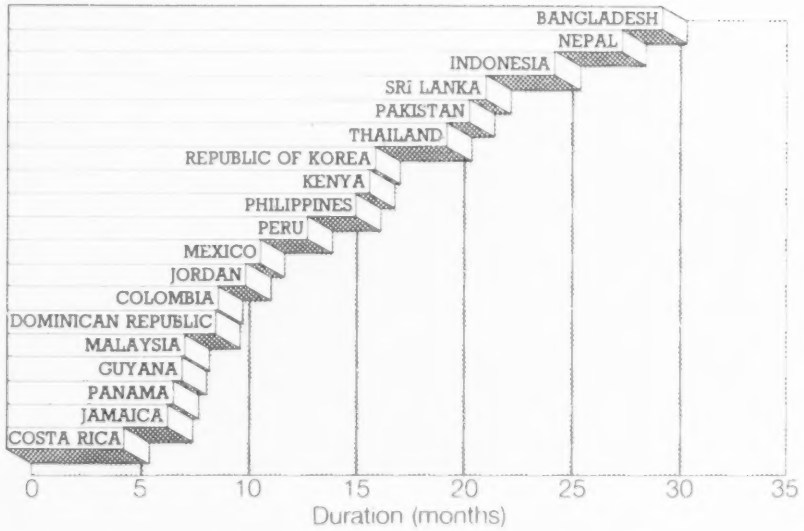
"In short, the situation may be so severe that reasonable adjustments will not occur in a timely fashion and countries just sink deeper into poverty."

McPherson's statement took a broad view of the causes of population stress, paying respect to the efficacy of population programs. As he put it: "The impact of population growth on economic growth is debatable. But almost no one argues that family planning hurts economic growth and it is rare indeed to hear it argued that very rapid population growth contributes to economic growth." – *A.H.*

SPEAKING GRAPHICALLY

BREASTFEEDING WORLDWIDE

How long do mothers breastfeed their babies?
Some answers from the recent World Fertility Survey –



Breastfeeding can be seen as one form of natural family planning in that a woman's likelihood of conception is greatly reduced during that period. The UNICEF chart above gives the duration of breastfeeding as recorded in the World Fertility Survey.

Visiting Scholar Award

PRB invites applications for its Visiting Scholar Award for the nine-month period beginning September 1986.

The Award, made available through a grant from the Andrew W. Mellon Foundation, is intended to provide the visiting scholar an opportunity to carry out a population policy-related project with either a domestic or international focus while in residence in PRB's Washington, D.C., headquarters. In this year's selection, priority will be given to projects that examine relations between population, resource utilization, and environment as they relate to public policy. Proposals for research in other areas are also invited.

The deadline for applications is March 1, 1986. Announcement of the Award will be made on April 1, 1986.

Interested individuals should forward a proposal outlining their planned activities, together with a current resume. Applicants are asked to provide the names of three references who could be called upon to comment on the proposed project. Applications should be sent to:

Visiting Scholar Program
Population Reference Bureau
777 14th St. N.W.
Washington, D.C. 20005

For further information, contact: Dr. Leon Bouvier, PRB's Vice President and director of its Policy Analysis Dept., phone 202-639-8040.

The Award consists of a negotiable stipend to cover salary and travel to and from Washington, D.C., as well as office space at PRB. Applicants are encouraged to consider combining this scholarship with a sabbatical leave when that is possible. Applicants should also indicate the amount of financial assistance they would require in order to accept the Award.

The Visiting Scholar program has been ongoing at PRB since 1980. The 1985-1986 scholar is Robert Gardner of the East-West Population Institute, who has been working on Asian immigration and Asian Americans.

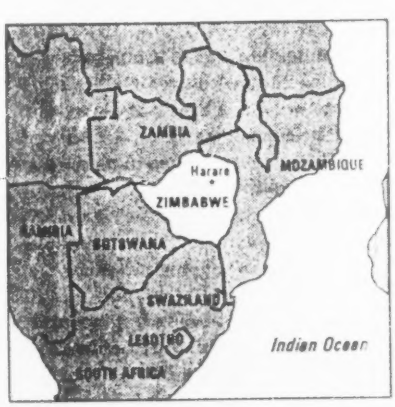
SURVEY REPORT

Zimbabwe

A landlocked country in south-central Africa, Montana-sized Zimbabwe (formerly Southern Rhodesia), consists largely of a high plateau 3,000-4,000 feet above sea level with a higher plateau, the *highveld*, running from southwest to northeast. While Zimbabwe's economy has been bolstered by a growing manufacturing sector, income from minerals and agriculture remains the mainstay. A good system of roads and railways has aided development; about half of the population is considered literate.

The Zimbabwe Reproductive Health Survey (ZRHS) was conducted in 1984 by the National Family Planning Council in collaboration with Westinghouse Health Systems in order to provide needed data on fertility and maternal and child health.

The results of the survey indicate an unusually high level of contraceptive use and knowledge and slowly declining fertility, although the women surveyed still expressed a desire for large families. The survey measured a current total fertility rate of 6.5 children, on the average, during a woman's reproductive years. This suggests some decrease from past fertility levels since the women 45-49 reported that they had had an average of 7.5 children. There is also evidence of a desire for child-spacing in that 6 out of 10 of the women 15-24 would like to delay the first birth. Still, the expected number of children was 6, 5.0 in urban settings, 6.6 in rural.



Fully 38 percent of the currently married women were using some form of family planning, 27 percent a modern method and 11 percent traditional. This is the highest rate in continental sub-Saharan Africa reported thus far. The large majority of modern method users, 85 percent, use the pill.

The use of breastfeeding is virtually universal, with the average duration 19 months; this has its own contraceptive effect by extending postpartum amenorrhea and improving the health of infants. While high, Zimbabwe's estimated infant mortality rate of 80 infants deaths per 1,000 live births each year is lower than in many other African countries. Still, one in four of the survey respondents had had at least one child die.

The survey also found that prenatal care is often used by Zimbabwean women. Eighty-eight percent of the women had prenatal care and about 7 in 10 had a medically supervised delivery. But, the use of postnatal care was exactly half that of prenatal.

Overall, a climate for greater use of modern family planning methods appears to exist in Zimbabwe. Knowledge of family planning is quite high, the availability of services is good and women feel that closely spaced pregnancies are harmful and that two years is a good birth interval. Still, one must wonder what the prospects for true fertility decline really are since a desire for large families remains the norm. It is, after all, quite possible to have 6 or 7 children spaced two years apart during the principal childbearing years. —C.H.

PRB Moves to New D.C. Headquarters

In December 1985, PRB migrated to new offices in the building below at the corner of 14th and H Sts. N.W., located in Washington's renascent "old" downtown. The more spacious quarters were necessitated by the increase in staff population to handle the new IMPACT research dissemination project. (IMPACT will foster knowledge and use of population information by policymakers.) At the same time, PRB is expanding its other services in publications, population education, and information services to the public.

PRB's own population now numbers 31 – 5 members of the IMPACT team; 3 editors; 9 demographers; 2 population education specialists; 2 population information specialists; 8 administrative support; and 2 interns.

The new address: 777 14th St. N.W., Suite 800, Washington, D.C. 20005. Phone 202-639-8040. PRB members and population researchers are always welcome during business hours.

PRB's new headqarters

Contraceptive Use Detailed

Nearly half a million women have been interviewed over the last decade in 61 developing countries through the World Fertility Survey and Contraceptive Prevalence Surveys. These women's answers have been recorded and tabulated, and the results analyzed, representing the world's largest body of knowledge on fertility and family planning around the globe.

For the first time, the major results and findings of these surveys have been presented together, in *Population Reports* (No. 8, September-October 1985), from the Johns Hopkins University's Population Information Program. This publication presents valuable tables along with accompanying commentary and analysis.

Reprinted here are the percentages of surveyed women using any method of contraception at the time of the survey for those countries for which country data are available. Surveyed women included only those currently married, age 15-44. "Any method" of contraception encompasses both modern and traditional methods. The year in which the survey took place is listed immediately after the country name. —*J.A.*

Country	% of currently married women 15-44 using any method
AFRICA	
Benin 1981-1982	20
Botswana 1984	29
Cameroon 1978	3
Ghana 1979-1980	10
Ivory Coast 1980-1981	3
Kenya 1977-1978	7
Lesotho 1977	5
Mauritania 1979	1
Nigeria 1981-1982	5
Senegal 1978	4
Zimbabwe 1984	38
ASIA & PACIFIC	
Bangladesh 1979-1980	13
Fiji 1974	42
Indonesia (Java & Bali) 1976	28
Korea, Rep. of 1979	55
Malaysia (peninsular) 1974	35
Nepal 1981	7
Pakistan 1975	5
Philippines 1978	39
Sri Lanka 1982	57
Thailand 1981	59
LATIN AMERICA & CARIBBEAN	
Barbados 1980-1981	47
Bolivia 1983	26
Colombia 1980	51
Costa Rica 1981	66
Dominican Republic 1983	47
Ecuador 1979	35
El Salvador 1978	34
Guatemala 1983	25
Guyana 1975	35
Haiti 1983	7
Honduras 1981	27
Jamaica 1983	52
Mexico 1979	40
Panama 1979-1980	61
Paraguay 1979	39
Peru 1981	43
Trinidad & Tobago 1977	55
Venezuela 1977	49
MIDDLE EAST & NORTH AFRICA	
Egypt 1980	25
Jordan 1983	26
Morocco 1983-1984	27
Syria 1978	20
Tunisia 1983	42
Yemen Arab Republic 1979	1

DEMOGRAPHER'S PAGE

If Present Trends Continue . . .

by Carl Haub

"According to Census Bureau forecasts . . ." "The United Nations expects that . . ." "When world population reaches 7.8 billion in 2020 . . ." "Hispanics in the U.S., the country's fastest-growing minority, will surpass blacks in the year . . ." "When world population stabilizes . . ."

This potpourri is representative of the way articles often describe population projections. Projections are one of demography's more popular products, but they come with many implicit caveats. Unfortunately, these warnings are often left unexpressed due to lack of space or time. Until now:

1. The Weather Bureau makes forecasts, not the Census Bureau. With considerable confidence, weatherpeople can say that, in the past, when the meteorological situation was thus-and-so on one day, the weather behaved in a certain manner the next (X percent of the time). But they do have a rather detailed "model" to go on that basically stays the same – the earth and its atmosphere. And their model is filled with precedents to guide them. A forecaster can issue a prediction for evening showers and drift off to sleep to the reassuring rumble of approaching thunder.

Demographers, by contrast, often have to make do with scanty or missing data, poor quality data, unpredictable behavior patterns and many other rocks in their path. They are consequently quick to point out that their projections are based on assumptions for the future applied to current data – and even those "current data" may themselves contain assumptions. If the physical earth were in a constant, catastrophic flux, with new continents springing up and the poles constantly shifting, weatherpeople would be quicker to call their weather report a hypothesis of what might be tomorrow. Bring your umbrella.

2. Projections themselves are never "wrong." Anyone can make perfect projections. The process of projecting a population is actually a fairly simple series of rote mathematical calculations, applying the *components* of change, fertility, mortality, and migration, to each age *cohort*.

For example, to project females aged 15-19 from 1985 to 1990 (when they will be 20-24), or any age group, we need only derive the number who will survive the five-year period; these proportions are readily available from life tables. Then, if there is some net migration assumed (the balance of those who move in or out of the area or country), that can easily be plugged into the equation. The result: projections of females 20-24 in 1990.

> The whole subject remains cloudy. Perhaps a good adjective to use in describing projections would be 'stylized.'

This simple process works for every age group in the population save one – those who will be born in the future. They haven't arrived yet, and to obtain their numbers we need to make assumptions about future birth rates. These assumptions produce the projected population (say, the 0-4 age group in 1990), whose rates of survival must also be calculated and any migration taken into account. Simple, right?

3. Cave assumptium. And yet, what good is a perfect projection – perfect, assuming no wrong buttons were pushed on the calculator, nor any incorrect entries inputted – if the assumptions behind those button-presses turn out to be waaaaay off. Perhaps the most famous example of wrong assumptions in modern history is the failure to anticipate just how long the U.S. "baby boom" would last. The baby boom was supposed to be just a short-term postwar upturn in the birth rate and, once the assumptions were plugged in, out popped the projections, mathematically accurate and perfectly wrong.

4. Do demographers really "expect"? For example, when a UN projection is issued for Africa for 2050, does that mean the UN "expects" any particular population size for Africa? In a way, it probably does. The UN usually puts out three projections (high, medium, and low), and the medium one does try to go right down the demographic fairway as far as expectations for a particular population are concerned. But, generally, it's best to use words like "expect" sparingly.

5. How did they do that? When dealing with the population of large areas, such as Africa, it would seem that a medium projection would be a relatively safe number to quote, since we could expect the projections for individual African countries to be either too high and or too low. It would be reasonable to expect a fair number of compensating errors.

But, if we are concerned with a single country, then we would do well to expand our vision beyond the medium projections. Future country populations can easily vary by factors of 3 and 4 while that of the entire region follows the medium projections rather well.

We could, then, set down one Golden Rule of projections: the smaller the geographic area, the more one needs to inquire "how the trick was done."

Other factors should be weighed when using projections. How recent were the base data when the projection was run? Often, census data used for the projections may be a decade or more old. While this may not materially affect the results, it also might. It is relevant to know both what assumptions were used and how they were derived.

Most of the time, fertility assumptions cause far more variation in projections

Carl Haub is PRB's Director of Demographic Analysis and Public Information.

than do mortality ones. For developing countries with high or moderately high fertility, it is usual practice to look at indicators which can be linked to fertility decline such as female educational levels, evidence of contraceptive use, and government policies on population growth. These, along with any data available on actual trends, can give guidance on reasonable future assumptions.

6. Is there a "natural law" for populations to approach replacement level? Everybody across the demographic spectrum concedes that someday population growth on earth must cease, simply because the total numbers eventually become so large – at present rates, there would be 1 trillion people three centuries from now, 4 trillion people four centuries from now, etc. (Whether the earth is overpopulated now and what its optimum size should be is a lively separate debate.)

Because of that premise, for the sake of projecting future "stationary" populations, we tend to assume that the "two-child" family will be reached and forever maintained (slightly over 2 births per woman on average is the "replacement level" by which a population just replaces itself in the long run, neither growing nor declining). Of course, we don't really know what number of children the world's couples might settle on (or when) but until recently it has seemed to make as much sense to assume that it would be the "replacement" level as anything else.

Recently, however, very low birth rates have been reported in Europe, as low as a lifetime average 1.3 children per woman in West Germany. Since some time has gone by without any sign of significant fertility rise there, some demographers are discussing whether the future holds long-term population decline, rather than the stationary population of replacement-level fertility.

The whole subject remains cloudy. Can or will very low birth rates continue forever? Are we seeing an entirely new kind of population dynamic in the developed countries? It is interesting to note that the most recent Census Bureau projections for the U.S. took as its "middle" series fertility assumption an average of 1.9 children per woman, below the replacement level. Statistics Canada likewise placed constant fertility at 1.7 in its own middle series projection. Such are the questions facing the poor demographer with a blank computer screen prompting: "What is your fertility assumption ___ enter and hit RETURN."

7. Other assumptions, other projections. Mortality assumptions usually play a much less important role than fertility, but are still important and should be looked at when using published projections. On the lower end of the scale, fixing the life expectancy of many less developed countries can be quite difficult due to incomplete data. On the higher end, it is more a question of just how high life expectancy can be expected to go. At present, most projections use rather conservative assumptions. In the 1982 UN assumptions maximum future life expectancy at birth was pegged at 75 for males and 82.5 for females. In countries such as Japan, these levels could be attained by the late 1980s. Are the UN levels too conservative? Some say that they are, but what basis exists to select truly high life expectancies such as 90?

Perhaps a good adjective to use in describing population projections would be "stylized." As such, the major sets of projections as produced by the United Nations, the World Bank, national statistical agencies, etc. are invaluable tools which cover a wide range of reasonable possibilities; the U.S. Census Bureau has 30 different series which allow one to look at every conceivable combination of assumptions.

8. Why run projections at all? If projections are nothing more than predictable results of one's assumptions of future demographic trends, why run them at all? One reason is that the results of seemingly small shifts in our assumptions can produce surprisingly different future populations.

The Census Bureau's 30 separate series are wide ranging, with the lowest projecting a U.S. population of 191 million in 2080 and the highest, 531 million. While few would expect either of these two extremes to actually occur, these rather large differences are not produced by what one might consider to be outlandish assumptions. The lower number results from a TFR of 1.6 children per woman (it is now 1.8), 250,000 net immigration per year (it is now usually thought to be 450,000) and a peak life expectancy of 77 (up from the present 75). The higher projection used a TFR of 2.3, net immigration of 750,000, and an ultimate life expectancy of 86. But since one must predict demographic trends for the course of the next century, it is impossible not to rule out changes in immigration law or fertility fluctuations only because they seem unreasonable today.

9. Some final fertility thoughts. The baby boom and the prediction of Dewey's victory over Truman in 1948 are the favorite examples of the failure of scientific prediction. But perhaps the time has come to stop beating demographers with the baby boom. They have suffered enough. If the baby boom were to happen again, it would certainly throw off current projections. But how likely is that, really?

In addition to the fact that U.S. fertility has been below 2.0 children per woman since 1973, we also have evidence from the Census Bureau's Current Population Survey, which shows that women's childbearing intentions have been about 2 for at least 10 years. Further, many of the factors influencing low fertility have actually increased since the baby boom and can only be expected to continue: two-earner families, costs of living, contraception.

Perhaps fertility will rise again in the U.S., perhaps greater sensitivity to child-care needs by employers will boost the birth rate, perhaps. Projections – we all need them, we all want them for what they can tell us about the future. But, in many ways, projections are not "user friendly." □

In Wisconsin, Grandparents Held Responsible for Teen Progeny

The state of Wisconsin has taken the bull by the horns in the fight against teenage pregnancy. In a landmark statute, legislators there voted in November to make parents financially responsible for infants born to their unmarried children under 18. Under the law, both sets of grandparents are required to support the infant if its parents cannot.

The "grandparents' liability law" was part of a 10-part legislative package that united pro-and anti-abortion forces against a common foe: teenage abortion. The 16-member committee produced this wide-ranging law – adopted unanimously by the State Legislature – the "Abortion Prevention and Family Responsibility Act of 1985." Although both sides are uneasy about portions of the bill, neither wanted to cause its failure, thus producing a rare compromise in the battlefield of sex and abortion.

The objective of the act is to reduce the number of abortions by significantly reducing the number of teenage pregnancies, and when pregnancies do occur, by offering teenagers other options. Among other things, the law imposes new criminal penalties on those performing late-term abortions, repeals an obsolete statute imposing criminal penalties against women seeking abortions, removes prohibitions on the display and advertisement of contraceptives (though the sale of contraceptives through vending machines remains illegal), and establishes a state adoption center.

The rationale behind the grandparents liability law is to give parents a larger stake in educating their children about sexuality and contraception. By forcing parents to become more responsible for their children's sexual behavior, State Rep. Marlin D. Schneider, who sponsored the bill, hopes to take from the taxpayers the burden of children whose parents cannot afford to support them. However, the law may have a limited effect on the state's welfare expenditures because many parents of teenage parents are themselves on welfare. Under the statute the incomes of both maternal and paternal grandparents would be considered before a teenage parent could receive public aid. In the past, the income of only the mother was taken into account. The law stipulates that parents are liable to pay "so far as [they] are able" until the teenager turns 18, marries, or joins the military. The law is up for review in three years.

Though the law was a product of the combined forces of both prolife and prochoice advocates, it has not been embraced by all since its passage. Proponents of the law say that it should reduce the welfare rolls, while opponents argue that it might unduly penalize the working poor.

Some Wisconsinites think the law will reduce sexual activity among teenagers, who (proponents hope) may think twice about unprotected intercourse when they know that their parents' pocketbooks are at stake. Others believe it will provide further inducement for abortions. Barbara Lyons of the Wisconsin Citizens Concerned for Life, a prolife group, said in the *New York Times* that girls may be pressured into having abortions because their parents "may see the financial responsibility as being something bigger and more unmanageable than actually it may be."

Guidelines and regulations for the law have yet to be written, however. Social service officals in Wisconsin do not know whether to deny benefits to girls or to grant them public assistance and try to collect later from the liable grandparents. Since the law took effect on Nov. 20, counties have been dealing with situations on a case-by-case basis. The state was expected to issue guidelines by mid-January.

Also in January, a seven-member Pregnancy Prevention board will start distributing $1.7 million in grants to cover the next two years. The grant money will support health clinics in schools, a media campaign to discourage teen sex, adoption counseling, and role-model programs. This money supplements the $1.5 million yearly the state currently spends on teen pregnancy programs, the *Washington Post* reported.

Sixteen-year-old Cindy Dorman said in the *Post* that the prevention of teenage pregnancy "is so important, there should be classes for parents who have a hard time talking to their kids about sex." – *J.A.*

Halley

Continued from page 3

much a hit-or-miss thing. In a second paper, Halley used the life table to propose a method of annuity calculation, and the way was now clear to calculate the experience of populations – and also make the books balance.*

Interestingly, Halley used his paper to get some pronatalist opinions off his chest:

> *The growth and increase of mankind is not so much stinted by any thing in the nature of the species, as it is from the cautious difficulty most people make to adventure on the state of marriage, from the prospect of the trouble and charge of providing for a family; nor are the poorer sort . . . to be blamed, since their difficulty of subsisting is occasioned by the unequal distribution of possessions, all being necessarily fed from the earth, of which so few are masters . . .*
>
> *The strength and glory of a King consisting in the multitude of his subjects, I shall only hint, that above all things celibacy should be discouraged, as by extraordinary taxing and military service, and those who have numerous families of children to be countenanced and encouraged---especially by an effectual care to provide for the subsistence of the poor, by finding them employment---*

Demography taken care for the time being, Halley went on to other tasks – the plotting of the earth's magnetic field,

Continued on next page

*The modern life table takes a real population's age-specific death rates and applies them to a hypothetical population, usually 100,000, all born at the same time. As this hypothetical population ages, death causes it to shrink in number, until no one is left. Looking at such a table tells you many things about a population, most conspicuously its members' average life expectancy at any age.

Halley

Continued from preceding page

meteorology, stellar astronomy. He even contrived a way to estimate the size of irregular areas, i.e., English counties, by weighing the appropriate pieces of the map: the simplicity of genius.

Halley's Prediction

In 1682, a decade before his Breslau calculations, Halley had witnessed the great comet of that year. He consulted with Newton about a law of gravitation that would account for the movements of the Solar System (a problem that Newton basically solved). And it was he who developed the theory that comets, obeying Newton's laws, orbit the sun like planets, albeit in very elongated ellipses.

Researching the past, he found several mentions of comet appearances sharing characteristics in common, including the comet of 1682. He concluded that these were serial appearances of the same bright comet, and in 1705, he predicted that it would return in 1758.

Unfortunately, he died 16 years too soon to see his prediction come true. But in 1758, the comet returned in spectacular fashion, and was promptly dubbed "Halley's Comet" by a comet-fascinated world. And it has revisited the inner Solar System every 75 or 76 years

Edmond Halley, scientist extraordinaire

(depending on perturbations from passing planets) ever since.

Halley's Comet is hardly the only comet; some dozen comets are visible from Earth each year, writes Nigel Calder in his informative book *The Comet Is Coming*.

There are comets that visit the inner Solar System fairly frequently, but that very frequency means they are on unstable orbits and are being gradually tugged to pieces by passing planets, and are barely visible at all.

Halley itself is the brightest of the 16 "Halley Class" comets that travel in stable orbits to return every 20-200 years. Beyond these are other comets on long trajectories that take thousands or millions of years to complete. And beyond them all is the hypothetical but plausible Opik-Oort Cloud, a vast, ghostly shell of comets encircling the sun, and comprising a comet population numbering somewhere on the order of 100 trillion.

So why is Halley's so famous? It's the brightest comet in its class, it carries the cachet of Edmond Halley's prediction, and while it's as faithful as say, Old Faithful, it doesn't take 20,000 years to do its thing. In fact, one of the things that makes Halley's Comet fascinating is that it's something to look forward to; the frequency of its visits slightly exceeds the life expectancy of most of the world's population. (Only 11 countries, including the U.S., have an average life expectancy of 75 years or more.) That makes Halley's truly a once-in-a-lifetime thrill for most people.

But if there's a bigger thrill than seeing Halley's Comet once, it's seeing it twice – and indeed, some 6 million Americans are alive today who were at least 5 years old in 1910 (old enough to appreciate the heavenly spectacle). It can be projected that about 25 million Americans 5 and over today may be alive when the comet returns in 2061 – according to the life table, courtesy of Edmond Halley.

– *A.H.*

Age. Curt.	Per-sons.	Age. Curt.	Per-sons	Age. Curt.	Per-sons	Age. Curt.	Per-sons	Age. Curt.	Per-sons	Age. Curt.	Per-sons
1	1000	8	680	15	628	22	585	29	539	36	481
2	855	9	670	16	622	23	579	30	531	37	472
3	798	10	661	17	616	24	573	31	523	38	463
4	760	11	655	18	610	25	567	32	515	39	454
5	732	12	646	19	604	26	560	33	507	40	445
6	710	13	640	20	598	27	553	34	499	41	436
7	692	14	634	21	592	28	546	35	490	42	427
Age Curt	Per-sons.	Age. Curt.	Per-sons	Age. Curt.	Per-sons	Age Curt	Per-sons	Age. Curt.	Per-sons	Age. Curt.	Per-sons
43	417	50	346	57	272	64	202	71	131	78	58
44	407	51	335	58	262	65	192	72	120	79	49
45	397	52	324	59	252	66	182	73	109	80	41
46	387	53	313	60	242	67	172	74	98	81	34
47	377	54	302	61	232	68	162	75	88	82	28
48	367	55	292	62	222	69	152	76	78	83	23
49	357	56	282	63	212	70	142	77	68	84	20

Age.	Persons.
7	5547
14	4584
21	4270
28	3964
35	3604
42	3178
49	2709
56	2194
63	1694
70	1204
77	692
84	253
100	107
	34000
	Sum Total.

Halley's life table for Breslau, 1687-1691

U.S. Metro Areas on the March Again

The population in U.S. metropolitan areas (MSAs) has grown faster than the nonmetropolitan population since 1980, representing a turnaround from the 1970s, when nonmetropolitan growth was faster, according to the Census Bureau.

This change is not a result of a more rapidly growing metro population, rather it stems from the slowing of nonmetro growth. Metro area growth stayed at the 1970s rate of 1.0 percent a year during 1980-1984, while the nonmetro growth rate declined from the average 1970s rate of 1.3 percent per year to 0.8 percent.

Over 76 percent of the U.S. population is now metropolitan, according to a recent Census Bureau publication "Patterns of Metropolitan Area and County Population Growth: 1980 to 1984." The study further states that 75 percent of the nonmetropolitan population resides in the South and Midwest, while the Northeast and West have relatively small nonmetro components.

Sun Belt population growth continues in the 1980s. In fact, about 90 percent of the U.S.'s population increase since 1980 has occurred in the South and West. Metropolitan population growth in the South and West continues to be very rapid in the 1980s although the average yearly growth is slightly below the 2 percent recorded during the 1970s. All of the 50 fastest growing MSAs in the 1980s are located in these regions, as are 94 of the 100 fastest growing metropolitan areas.

In the Northeast, where the metropolitan population declined in the 1970s, metro areas are now clearly growing again, the report states. In the Midwest, however, population growth in metro areas has slowed perceptibly since 1980.

Central cities are growing more (or losing less) than they did in the 1970s, while suburban population increase has slowed since the 1970s. Only seven of the 23 MSA central cities of 500,000 or more have lost population since 1980, compared with 13 in the previous decade.

As a group, MSAs of 1 million and over population have higher rates of growth in the 1980s than in the previous decade, while areas below 1 million generally are experiencing slower growth than before. These smaller MSAs are still growing faster than the areas of 1 million or more, but the differences are now small.

—J.A.

States with Higher Nonmetropolitan than Metropolitan Growth Rates: 1980 to 1984

Americans at Least Know What's Good for Them

In this fitness-conscious society, how much does the American public really know about staying healthy and preventing disease? Quite a bit, actually, according to the Health Promotion and Disease Prevention Supplement to the National Health Interview Survey, conducted by the National Center for Health Statistics.

170,000 men and women over 18 years of age were interviewed about personal practices related to health, and about their awareness of various factors on the prevention of disease.

All in all, respondents were aware of the detrimental effects of cigarette smoking and alcohol consumption, and were well versed on the causes of such ailments as heart disease and high blood pressure. Respondents seemed especially well informed about maintaining dental health.

Do they practice what they preach?

Continued on next page

POSITIONS/ PROFESSIONALS

Senior Research Analyst needed by international organization conducting research in health and family planning. Duties include development and management of projects in less developed countries. Doctorate or Masters level in sociology/demography or maternal and child health. Sound knowledge of statistical methods and computer software for data analysis and demonstrated report writing skills required. Fluency in Spanish or French preferred. Salary range: $19,200-$30,200 based on experience. Contact: Personnel, Family Health International, 1 Triangle Drive, Research Triangle Park, N.C. 27709. An Equal Opportunity/ Affirmative Action Employer, M/F/H.

Americans Know

Continued from preceding page

The survey's questions on general health habits reveal that, for the most part, the respondents maintain good health practices such as visiting the same doctor or health facility regularly. Fifty-five percent of the respondents (87 percent of those over 65) said that they eat breakfast almost every day. A large proportion of those surveyed, however, (66 percent) reported that when visiting a doctor for routine care, proper foods are rarely or never discussed.

That old adage that eight hours per night is the correct amount of sleep seems to be true for many of the survey respondents. Sixty-six percent get seven to eight hours of shuteye each night on average, while 22 percent report less than seven hours and 12 percent more than nine hours.

There are several glaring exceptions to the rule, however. To the question, "When driving or riding in a car, do you wear a seat belt?" more respondents answered "Never" (36 percent) than did "All or most of the time" (30 percent). 18 percent say they wear their seat belts some of the time, and 16 percent once in a while. (Of all those interviewed, 1 percent don't ride in cars at all, though that percentage drops to 0 in the 18-28 years category.)

In addition, despite the fact that awareness of the negative effects of cigarette smoking is high, 30 percent of the respondents are current smokers, 25 percent former smokers, and 45 percent say they've never smoked. For the age category 18-29 years, those who have never smoked number 56 percent, though the proportion of current smokers stays steady at 30 percent.

Only 37 percent of those surveyed (27 percent of the men and 46 percent of the women) were trying to lose weight at the time of the interview. True to form, the respondents were correct in replying that eating fewer calories and increasing physical activity are the two best ways to lose weight. A full 48 percent surveyed considered their weight "about right" and 20 percent thought of themselves as "only a little overweight."—*J.A.*

SOFTWHERE

POPGRO: A Population Growth Simulation is an interactive program which allows the user to study three growth models: an unlimited growth model, a limited growth model, and a limited growth with lag time model. The user inputs initial population size, growth rate, carrying capacity, duration of simulation, and response time lag. Output is provided in the form of data tables, population vs. time graphs, and $\log_e$ (population) vs. time graphs.

This program was designed for use in the high school and college classroom. It is useful for anyone who wishes to compare population growth models.

POPGRO is available for the following computer types: TRS-80, Model I/II; Apple, II/II+/IIe; Commodore; and IBM PC. To obtain program diskette and 30-page manual which includes sample exercises, send $49.95 to: Diversified Educational Enterprises, 725 Main Street, Lafayette, Ind. 47901.

POPULATION UPDATE

Estimated United States Population

As of August 1, 1985	239,019,000
As of August 1, 1984	236,896,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 978.

Estimated World Population

As of January 1986	4,887,000,000
Annual Growth	82,000,000

Estimated by extrapolation of the mid-1985 world population given on PRB's 1985 World Population Data Sheet.

Latest Provisional Statistics for the U.S.: August 1985

	12 months ending with August					
	Number		Rate			
Item	1985	1984	1985	1984	1983	1982
Live births	3,743,000	3,642,000	15.8	15.5	15.8	16.0
Deaths	2,077,000	2,029,000	8.7	8.6	8.6	8.5
Natural increase	1,666,000	1,613,000	7.1	6.9	7.2	7.5
Marriages	2,443,000	2,449,000	10.3	10.4	10.6	10.6
Divorces	1,182,000	1,161,000	5.0	4.9	5.1	5.2
Infant deaths	39,200	39,100	10.5	10.7	11.0	11.4
Population base (in millions)			237.6	235.2	233.0	230.8

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births. Rates are based on revised population estimates from the 1980 Census.

Source. Monthly Vital Statistics Report (Vol. 34, No. 8) from the National Center for Health Statistics.

A U.S. Profile in Numbers

If you've ever wanted a population publication that compactly summarized what's going on demographically in the U.S. today, you might consider the Census Bureau's *Population Profile of the United States: 1983/84*.

This latest edition in the Bureau's series of profiles is full of basic population data and trends. It summarizes the wide range of demographic, social, and economic data collected by the Census Bureau during 1983 and 1984. Each section deals with a major subject, and in addition spells out the bottom line in clear prose highlights.

Thus, in the *Profile* you can discover that: the U.S. population is expected to pass the 300 million mark in 2024; 75 percent of the population lived in one of the nation's 277 metropolitan areas in 1983; there were 12.3 million college students in 1983, 1.5 million of whom were age 35 or older; and the population 18 to 24 years old reached an all-time high of 30.5 million in 1981 but will never again be as large, based on middle series projections.

From 1980 to 1983, 24 states experienced net out-migration, but this population loss was offset by natural increase in 20 of them so that 46 states recorded population growth (the other four lost population: Michigan, Ohio, Iowa, and Indiana).

In 1984, 52 percent of American men and 32 percent of women 20 to 24 years of age were living with one or both of their parents, compared with 43 percent and 27 percent, respectively, in 1970.

While real median family income rose in 1983, to $24,580, this figure remains below that of 1973, when it was $27,000 in 1983 dollars.

The data primarily cover the U.S.; however, some data at the state level are provided. The data are presented with illustrative charts and graphs; summary tables of annual data on demographic, social, and economic characteristics are appended. —*W.P.*

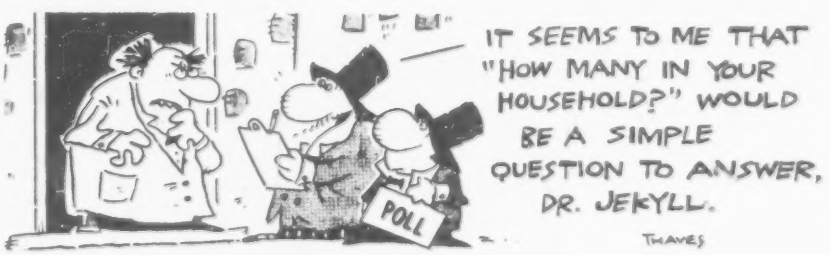
This *Population Profile of the U.S. 1983/84* (Current Population Reports Special Studies, Series P-23, No. 145) is on sale for $3.25 by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

TAKE A NUMBER

German Birth Rate Down Again!: Following on our previous reports on the German birth rate, *Population*, the French demographic journal, reports that the West German total fertility rate (TFR) declined to 1.27 children per woman in 1984 (it was 1.32 in 1983). Although a national-level TFR of 1.0 seems inconceivable, one must again wonder just how low German fertility can go.

Big Apples and Big Oranges: New Yorkers may have been chagrined to hear that their fair city is due to be passed by Los Angeles in population by the year 2000, according to the Bureau of Economic Analysis projections. By 2000, the BEA projects that the Los Angeles area will be home to 8.9 million residents, besting Gotham's 8.4 million. *Sic transit gloria hudsonensis?* New Yorkers may well wonder how their city of 7 million can be passed by one of 3 million. It happens that the BEA projections were put in terms of "metro areas." Here we have an interesting case of the claim to urban primacy based on a somewhat arbitrary statistical definition. The Los Angeles "metro area" as defined in the BEA report is the *Primary* Metropolitan Statistical Area (PMSA) which consists of L.A. and its suburbs of Burbank, Long Beach, etc., all in Los Angeles County. The entire L.A. metro area, however, the *Consolidated* MSA (CMSA), has a total population of 12.4 million, far short of the New York CMSA's 17.8 million. The L.A. CMSA is defined as stretching from Riverside-San Bernadino to Oxnard to the north while New York's includes the Jersey area and Connecticut and Long Island commuter counties. While many of those "commuter areas" are becoming less so, we are left with the following: New York *city* is much larger than Los Angeles *city*, the New York CMSA is larger than the Los Angeles CMSA and that should also be the case in 2000. But, the L.A. PMSA is projected to pass the New York PMSA (which includes only the Big Apple and its New York suburban counties to the north). Confused? Regular *PT* readers will remember the "Demographer's Page" in the November 1985 issue which discussed the new metro definition. Finally, this defense of New York's status has no relation to its writer's geographic origins. We would never stoop to that. —*C.H.*

ADDENDA



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CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

THE DICTIONARY OF DEMOGRAPHY, by Roland Pressat, edited in English by Christopher Wilson. Oxford, England: Blackwell Reference, 1985. 243 pages. $60.00. ISBN 0-631-12746-1

This ambitious undertaking is the English version of Pressat's *Dictionaire de Demographie*. It is more than a translation; indeed as the English editor states: "The English- and French-speaking worlds of demography are not identical This difference is reflected in the two dictionaries, the present work covering a wider range of material and methodology than the French volume."

Pressat himself comments that "It is with a certain regret that I note a certain loosen ss in the terminology which is likely to be a reflection of the nature of the Anglo-American demography, which is manifestly more liberal than its French counterpart." The author and the editor do not necessarily see eye to eye on a number of points.

These comments do not detract from the excellence of this monograph. A total of 230 pages are devoted to not only defining but explaining, often in detail, demographic terms and concepts – and more than just basic terms. Concepts like momentum and total fertility rate (and Bongaart's decomposition) are clearly explained. Where appropriate, graphs and formulas are used.

The biographical entries leave much to be desired, however. Although it is not stated, these are apparently limited to deceased persons. The dictionary's compiler seems to have been particularly concerned with those who worked on life tables including such somewhat arcane names (to American audiences) as Antoine Deparcieux and William Kersseboom. Only one American is included: Alfred Lotka. One looks in vain for such major American contributors to the field as Raymond Pearl, Pascal Whelpton, and incredible as it may seem, Frank Notestein! It would have been preferable to delete the entire biographical portion of the Dictionary rather than have such obvious omissions.

Aside from this major weakness, *The Dictionary of Demography* is an excellent work and will be of great utility to any demographer or anyone interested in learning more about the discipline.

– Leon F. Bouvier

CENSUSES OF ASIA AND THE PACIFIC, 1980 ROUND, edited by Lee-Jay Cho and Robert L. Hearn. Honolulu: East-West Population Institute, 1984. 380 pages. $15.00. ISBN 0-86638-052-3

This volume is the second edition of the East-West Center's classic compendium on census-taking in the Asian and Pacific region. The 1980 "census round" volume describes enumeration methods in 19 countries from Pakistan to the U.S.

The censuses are covered in detail with quick reference tables on subjects investigated by each census and facsimiles of the questionnaires in the Appendix. We can quickly determine that, while marital status was asked on all 19 censuses, only New Zealand inquired about cigarette smoking. Indonesia and Thailand asked a question on the ever-use of contraception on a sample basis, an unusual topic for a national census.

Census methods reflect the difficulties encountered in counting the people in developing country settings. Pakistan uses radio jingles to overcome literacy problems, while in Papua New Guinea, census enumerators wear special T-shirts so that villagers know that the census team has arrived.

Censuses of Asia and the Pacific is an invaluable contribution to the field in that, among other things, it makes us more aware of the conditions under which data are collected.

-- Carl Haub

LA FAMILIA: Chicano Families in the Urban Southwest, 1848 to the Present, by Richard Griswald del Castillo. South Bend, Ind.: University of Notre Dame Press, 1984. 224 pages. $18.95. ISBN 0-268-01272-5

Griswald del Castillo has provided a historical evaluation of popular myths or stereotypes which have developed about the Mexican family. Paradoxically it is often seen as a warm, supportive, and well ordered unit while also being patriarchal, authoritarian, and responsible for the low degree of assimilation into American life because it does not emphasize educational and occupational advancement.

The author has focused on the disruptive effects of industrialization and urbanization, the continuing Mexican immigration, intermarriage with non-Mexicans, and patterns of changing values which have had diverse influences on this ethnic group.

The detailed historical analysis shows that Mexican American families in the U.S. have often not matched the stereotyped images. Families have had to be flexible and adaptive to survive. Different social, political, and economic factors have contributed to both their historical and contemporary diversity. Yet there is the conclusion that despite profound changes in the material and cultural environment, an important heritage from the past remains. This promises love, self-respect, hope, and caring as essential aspects of these families.

– Jerry N. Judy

SPOTLIGHT

THE PHILIPPINES

Population (1985 est.): 56.8 million
Births per 1,000 pop.(1983 est.): 32
Deaths per 1,000 pop.(1983 est.): 7
Rate of population growth: 2.5 percent
Total fertility rate: 4.7
Infant mortality rate: 50 infant deaths per 1,000 live births
Life expectancy at birth: 64 years
Exports(1984): Coconut products, sugar, electrical components, garments - US$5.3 billion
Imports: Petroleum, industrial equipment, wheat - US$5.9 billion
GNP per capita (1983): $760
Capital (*de facto*): Manila

by Alexander von Cube

While the Philippine archipelago consists of 7,100 islands and islets extending 1,100 miles off the Southeast Asian rim, eleven islands account for 95 percent of its land mass. Luzon, about the size of Kentucky, and Indiana-sized Mindanao are by far the two largest. Mountains and uplands constitute two-thirds of the country's area and the most important agricultural area, 100 by 40 miles in size, is located on Luzon.

Magellan claimed the islands for Spain in 1521 and they remained under Spanish rule for the next 377 years. The country's population of 57 million is 83 percent Catholic, a legacy of Spanish rule, while the balance is Protestant or Muslim. There are nearly five million members of diverse cultural groups in the country and about 100 languages and dialects are spoken, although Pilipino, a derivation of Tagalog, is the national language and English is the language of government. The country came under U.S. administration following the Spanish-American War, but attained independence in 1946 with a constitution patterned after that of the United States.

About half of the Filipino population is employed in agriculture, which accounts for about one-fourth of the national economy. The country's economy has been sluggish in recent years, with the decline in world sugar prices and a drop in the export of forest products, a result of past slash-and-burn practices.

The growth of the population has been a concern of the government, and a policy to reduce the growth rate has been adopted. In 1970, President Marcos announced an official policy of family planning. The population act signed in August 1971 stated in part: " quantitative goals will be established and adopted and family planning will be made part of a broad educational program " Prime Minister Virata recently stated that current population and food production growth rates, if continued, would lead to a one-third food shortage later in this century. The government's population program makes a variety of family planning services available, while safeguarding a couple's right to choose their number of children; abortion is illegal in the Philippines.

In 1948 the population of the Philippines was 19 million, so there has been nearly a threefold increase to the present. While fertility has fallen to an average of a little less than 5 children per woman, rising life expectancy has kept the growth rate at a rather high level. The Philippines now rank 15th in population worldwide.

The long-term policy goals also include replacement fertility or an average of 2 children per family by the year 2000. To achieve these goals the program is currently designing and implementing projects to reach preschoolers, age 0-6, youths age 7-14, and the premarriage group of 14 through 24. The national plan encourages young women to delay marriage until at least the age of 20.

The United Nations "medium variant" projection indicates that the population would grow to 103 million by 2025, assuming that fertility would fall to the "two-child" family by 2020-2025. While fertility has fallen from an average of 6.5 children per woman in 1960 to 4.7 in 1980, the data also suggest that the decrease in the latter half of the 1970s was not as rapid as the earlier half. It would appear that the government's goals for population growth are not being met. And, despite the fertility decrease, the country's population is still quite young, with about 43 percent below the age of 15.

The Philippines provides one example of a national program to retard population growth while strictly avoiding any coercive measures to achieve that goal. Yet Philippine planners will need to prepare for a population about twice the present size in the early 21st century, even if the government's aims are met.

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Philippine Embassy

Ceremonial sailboats at Zamboanga on the island of Mindano.